# OIL SPILLS

*A Strategy for British Columbia*

BC Environment

Honourable John Reynolds,
Minister of Environment

91-01160/

**Canadian Cataloguing in Publication Data**

Main entry under title: Oil spills

ISBN 0-7726-1209-9

1. Oil spills – Environmental aspects – British Columbia. 2. Environmental protection – British Columbia. I. British Columbia. Ministry of Environment.

TD196.P40342 1990 363.73'82'09711
090-092258-3

## ACTION TO PREVENT AND RESPOND TO OIL SPILLS

## FOREWORD FROM THE MINISTER

When oil from the leaking American barge, *Nestucca*, drifted north onto B.C. beaches in January 1989, shocked citizens realized suddenly that our beautiful coastal environment could be seriously affected by spills at a distance from our own shores.

We acknowledged with a sense of frustration that we were unable to react quickly to minimize the damage to our wildlife and coastal resources.

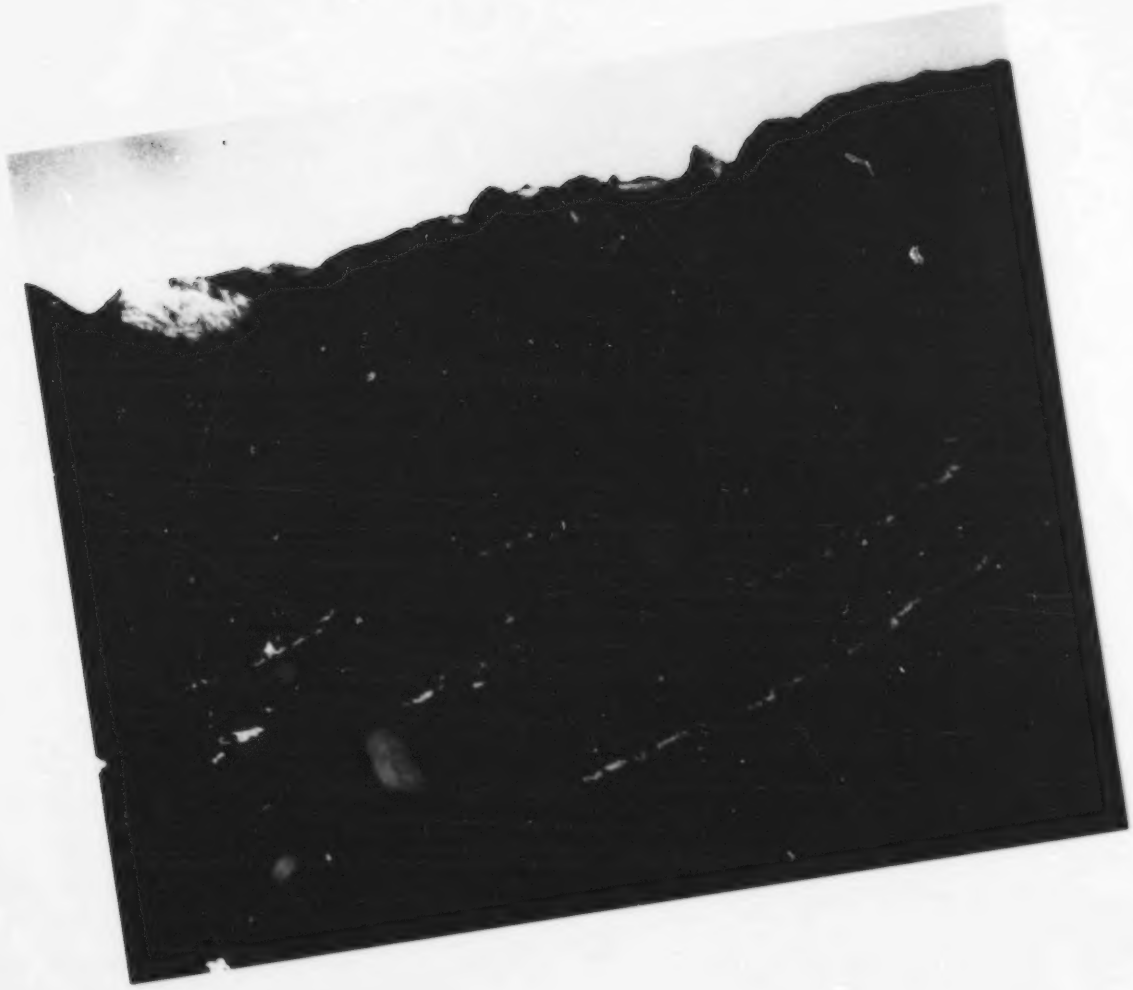
Since that time, the Province has been actively engaged in preparing to respond to such accidents.

As lead provincial coordinating agency for marine oil spills in British Columbia, the Ministry of Environment recently published a comprehensive strategy for coordinated action with industry, the public and the federal government.

The strategy, summarized in this publication, will guide the Province in its allocation of resources and personnel both in the preparation for, and response to, oil spills that may occur. It will be reviewed and improved as new knowledge and techniques become available.

I invite all British Columbians to become more involved in protecting our unique coastal environment from the threat of future oil spills.

John Reynolds

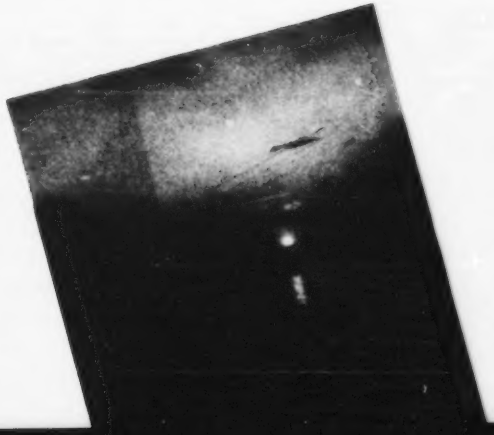


## GUIDING PRINCIPLE:

Central to B.C.'s oil spill strategy is the Province's commitment to protect the coastal environmental resources from harmful oil spills emanating from marine vessels, industrial facilities or inland sources.

These provincial resources include all land between the high and low water mark, the seabed of the Strait of Georgia, Juan de Fuca and Queen Charlotte Sound-Johnstone Strait, and the coastal seabed between major headlands.

Since the federal government is also responsible for shipping and for certain other marine resources, responsibility to protect and manage marine resources is a joint effort between provincial and federal agencies.



## BACKGROUND

On December 22, 1988, the tanker barge *Nestucca* was struck by its tug off Grays Harbor, Washington. The resulting puncture in the barge's hull leaked 875,000 litres of fuel oil into Washington's coastal waters.

Not only were the nearby ocean and shoreline polluted, but the spill, the largest in B.C.'s history, affected over 150 kilometres of its coastline. Estimates of the Canadian Wildlife Service placed the number of dead seabirds at between 20,000 to 30,000. It was clear that a strategy for cooperative research and action had to be developed – and quickly.

Less than a month later, on January 20, 1989, British Columbia and Washington formed the *Oil Spill Task Force* to make recommendations to prevent and respond to oil spills in the future.

On March 24, 1989, with eight of 11 cargo tanks torn open by the rocks of Bligh Reef, the tanker *Exxon Valdez* released some 260,000 barrels of crude oil into the waters of Prince William Sound, Alaska. Oil reached thousands of miles of Alaska coast line, causing extensive damage to beaches, seabirds, marine mammals and other natural resources.

Many Alaskan coastal communities faced economic and social hardships as the spill's devastation spread. For example, virtually the entire commercial salmon season of Kodiak Island communities was lost.

*Exxon Valdez* with boom in place to prevent oil escaping while repairs to hull are made

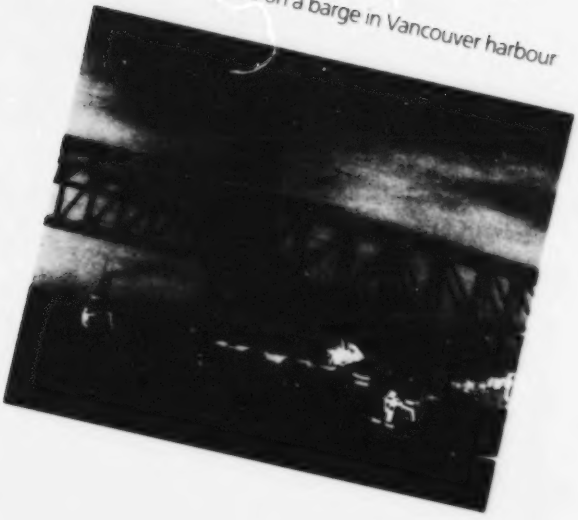
Clearly, such catastrophic spills could happen again and the capacity to deal with them was far from adequate.

The mandate of the task force was to investigate ways and means of preventing oil spills; review oil spill response capability; document and assess the mechanisms for handling compensation claims; and develop a coordinated contingency plan for preventing and responding to oil spills in the future.

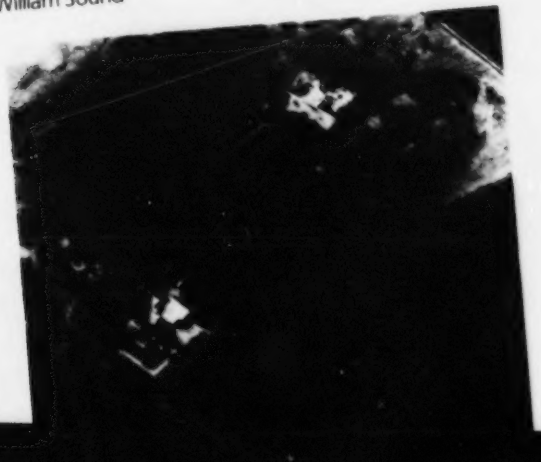
The first major accomplishment of the task force was the signing on June 16, 1989 of a *Memorandum of Agreement* on how B.C. and Washington would deal in the future with transboundary environment and wildlife issues.

On July 3, 1989, Oregon officially joined the task force. Alaska followed suit on August 3, and California completed the current membership on September 21 of the States/British Columbia Task Force.

Railroad tank cars on a barge in Vancouver harbour



Offloading oil from the damaged tanker vessel *Exxon Valdez* on Bligh Reef in Prince William Sound



Environment Youth Corps at the Vancouver harbour oil spill

## PREPAREDNESS

Reducing the risk of oil spills is the most effective strategy for responding to the threat of environmental damage from accidents involving oil carriers.

The Province places a high priority on initiatives designed to reduce the risk of marine oil spills, and to minimize environmental damage and social and economic impacts.

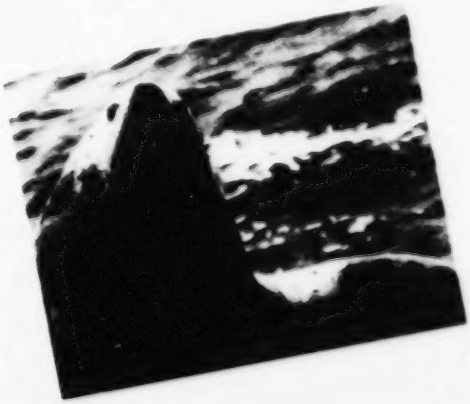
These initiatives include monitoring federal research into improved vessel design (such as double hulling), traffic monitoring and navigation, reduced tanker/barge traffic, modification of traditional traffic routes to avoid areas that are accident prone and environmentally sensitive, and the encouragement of decreased dependency on oil and oil products.

Provincial efforts are focussed on identifying and mapping provincial Crown resources, which include intertidal marine habitats, wildlife habitats and populations, archeological, cultural and aquatic resources, parks and ecological reserves.

This resource information will enable the Province to assess the opportunities for shoreline protection and cleanup measures before a spill occurs. Computer-generated maps and video tapes of the B.C. coastline will be used to record both resources at risk and shoreline conditions. The Ministry has also developed and is maintaining a computerized directory of scientists and professionals who may be called upon to provide expertise.

A high priority will be placed on recording the sensitivity of existing environmental conditions and monitoring the development of new technologies to respond to major oil spills. Such information will be shared amongst Canadian agencies and with our American partners.

Training flight for monitoring purposes



## PROVINCIAL GOVERNMENT RESPONSE

As the lead agency for the development of the B.C. Marine Oil Spill Contingency Plan, the Ministry of Environment, in conjunction with the Provincial Emergency Program, is responsible for coordinating the work of all provincial agencies and providing the provincial on-scene command.

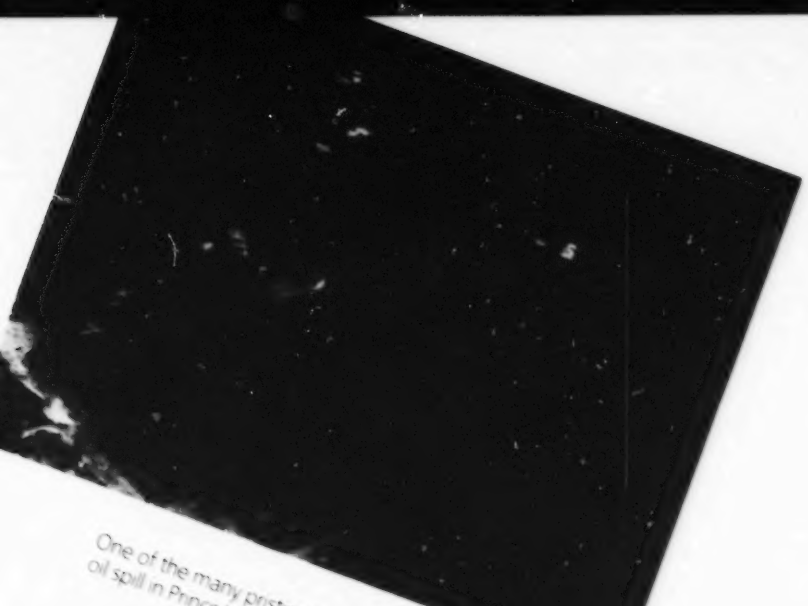
Using its regional office staff as a nucleus, the Ministry is also training oil spill response teams to be used in case of a major spill. Training includes sessions on oil detection and monitoring, containment and recovery, legal sampling, shoreline restoration, impact assessment, waste disposal, wildlife rescue and use of equipment. Regular oil spill simulation and exercises will be an integral part of the training, as will joint exercises with federal, provincial and American teams.

Equipment sufficient to handle beach cleanup and wildlife rescue for the first 72 hours will be established at depots strategically situated along the B.C. coast. Contracts will be pre-arranged with local companies to supply additional equipment on a need-to-use basis.

A computerized inventory of available oil spill response equipment is being developed and maintained in cooperation with federal agencies and member jurisdictions of the States/British Columbia Task Force.

The Ministry also intends to enter into agreements with other provincial agencies to formalize the ways in which manpower, expertise, facilities and resources will be allocated in the event of a major oil spill.

The Province is encouraging coastal communities and government, through resource-sharing agreements, to participate in localized, near-shore oil spills. Assistance will be offered by the Province in the identification and inventory of local experts, cleanup equipment, local resources and their sensitivity to oil impact, potential oil waste disposal sites and marine transportation facilities.



One of the many pristine bays polluted by an oil spill in Prince William Sound

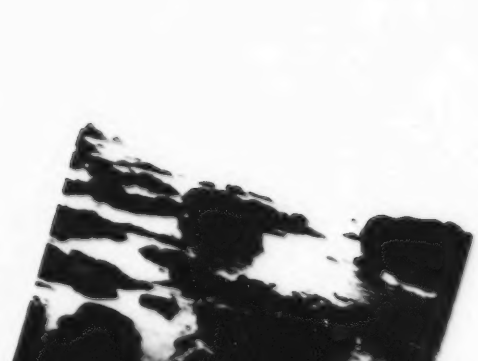
## INDUSTRY'S RESPONSIBILITIES

Industries and companies that transport oil are responsible for their own oil spill preparedness. However, the Ministry of Environment will set standards and undertake periodic reviews to ensure that the level of "readiness" established by those companies in their formal contingency plans is maintained.

When a spill is being adequately managed by a polluter, the Ministry will monitor the situation. It will also send out resource and assessment teams in order to establish shoreline protection and cleanup priorities in conjunction with federal agencies.

The Ministry will take an on-scene command role only when a spill exceeds the capability of the polluter to deal with it, when the polluter is unknown, or when it is otherwise in the provincial interest to take action.

Mobile incinerator used to burn oily debris



## FEDERAL AND INTERNATIONAL COOPERATION

To clarify the roles and responsibilities of all concerned jurisdictions, existing federal agreements will be reviewed and amended periodically and new agreements will be drawn up to establish the roles and responsibilities of all concerned.

Federal and provincial cooperation will be enhanced through joint exercises, coordination of plans and studies, and the sharing of resource technologies.

In order to improve the response to transboundary incidents, the Province will take part in agreements to share resources and expertise during emergencies and will establish a notification network with neighbouring U.S. coastal states.

The intent of the States/British Columbia Oil Spill Memorandum of Cooperation (June 1989), which outlines improved transboundary response and information sharing, will be pursued actively by the Province. The States/B.C. Task Force will, on an annual basis, provide reports to member jurisdictions or individual activities that may be of mutual benefit in oil spill preparedness, prevention and response.

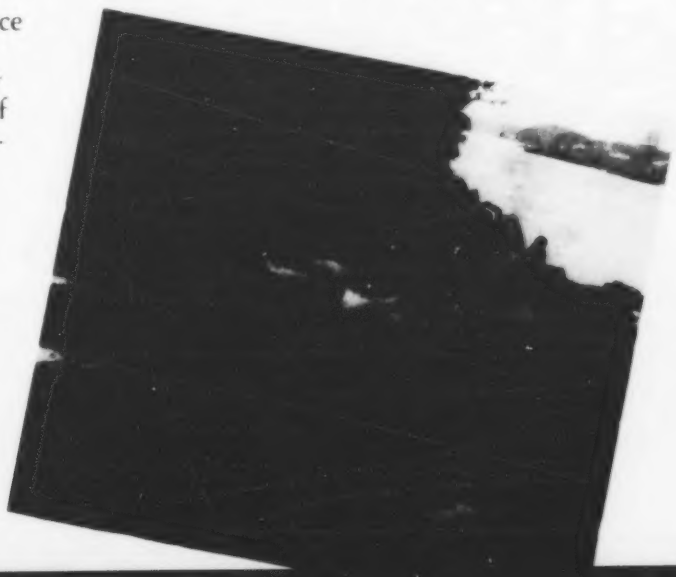
## MEMBERS OF THE PUBLIC

The Province intends to establish an oil spill auxiliary force that can effectively participate in response to a major oil spill. A system will be developed to identify, train and register members of the public for such a force.

## NATIVE PARTICIPATION

Due to their intimate knowledge of the coastal environment and their concern for the impact of oil on resources, the input of Native coastal communities is being sought to determine shoreline sensitivity, and for analysis and protection guidelines for Native cultural and historical sites.

Native people living close to beaches polluted by the *Nestucca* oil spill were among those who volunteered their time to clean up the beaches. Agreements with Native band councils will be established so that Native teams will be trained and ready as part of an oil spill auxiliary in the event of another major oil spill.



Cleanup crew at work on an oiled beach

## WILDLIFE RESCUE

Because of the strong public concern for the fate of wildlife affected by an oil spill, the protection and rescue of marine birds and animals is a high priority.

Together with the SPCA, Canadian Wildlife Service, Wildlife Rescue Association and the Vancouver Public Aquarium, the Ministry is establishing guidelines and training teams to protect and rescue birds and animals affected by an oil spill. Environment Youth Corps crews will be available to assist in this work.

Members of the Environment Youth Corps using absorbent pads to mop up oil in Vancouver harbour

Cleanup crew spraying pressurized hot water onto oiled shoreline. Oiled water is sucked up into waiting vessels

## COST RECOVERY AND COMPENSATION

A system is being developed to evaluate spill damage. The data includes photographs, scientific samples, oil spill distribution data, numbers of birds and mammals lost, habitat affected, and cost of cleanup. Conservation officers of the Ministry will be involved in assisting trained response personnel in legal sampling, gathering and labelling.

## WASTE DISPOSAL

The Ministry of Environment is developing criteria for the environmentally safe handling and storage of waste. Together with local governments, industry and other agencies, the Ministry will designate permanent waste disposal sites, temporary sites and incineration sites for oil debris.

The results of a spill can be devastating for wildlife

Seal pup aground on an oily beach

*Photos courtesy of: Canadian Wildlife Service - M. Lemon, Canapress, Environment Canada - Colin Wykes and Keith Hebron, Ministry of Environment, William Mirchoff, Dean Monterey, M. Naga, Stafford Reid, Vancouver Port Corporation, Western Canada Wildlife , Ministry of Parks and The Canadian Coast Guard.*

A more detailed description of strategies may be found in:

*Provincial Marine Oil Spill Preparedness and Response Strategy*

available from:

Environmental Emergencies and
Coastal Protection Branch
Ministry of Environment
777 Broughton Street
Victoria, B.C. V8V 1X5
(604) 356-9302